DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	DEER POND	Lake Area (ha):	12.14
Town:	NOTTINGHAM	Maximum depth (m):	4.0
County:	Rockingham	Mean depth (m):	0.8
River Basin:	Coastal	Volume (m^3):	94000
Latitude:	43°05'22" N	Relative depth:	1.0
Longitude:	71°12'57" W	Shore configuration:	---
Elevation (ft):	425	Areal water load (m/yr):	4.04
Shore length (m):	600	Flushing rate (yr^{-1}):	5.20
Watershed area (ha):	103.1	P retention coeff.:	0.70
% watershed ponded:	0.0	Lake type:	natural w/dam

BIOLOGICAL:		15 January 1993	8 September 1992
DOM. PHYTOPLANKTON (% TOTAL)	#1	CRYPTOMONAS 40%	LYNGBYA 50%
	#2	PERIDINIUM 25%	DINOBRYON 30%
	#3	SYNURA 15%	CHRYSOSPHAERELLA 10%
PHYTOPLANKTON ABUNDANCE (cells/mL)			1240
CHLOROPHYLL-A (µg/L)			33.39
DOM. ZOOPLANKTON (% TOTAL)	#1	NAUPLIUS LARVA 28%	NAUPLIUS LARVA 50%
	#2	CYCLOPOID COPEPODS 28%	KERATELLA 14%
	#3	KERATELLA 17%	
ROTIFERS/LITER		40	69
MICROCRUSTACEA/LITER		62	113
ZOOPLANKTON ABUNDANCE (#/L)		104	189
VASCULAR PLANT ABUNDANCE			Abundant
SECCHI DISK TRANSPARENCY (m)			2.7
BOTTOM DISSOLVED OXYGEN (mg/L)		6.2	0.4
BACTERIA (E. coli, #/100 ml)	#1		< 1
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : 4000

CHEMICAL:

Lake: DEER POND
Town: NOTTINGHAM

	15 January 1993		8 September 1992		
DEPTH (m)	2.5		1.0		3.0
pH (units)	6.4		6.6		6.3
A.N.C. (Alkalinity)	10.9		7.3		7.2
NITRATE NITROGEN	< 0.02		< 0.02		< 0.02
TOTAL KJELDAHL NITROGEN	0.74		0.58		1.11
TOTAL PHOSPHORUS	0.017		0.019		0.064
CONDUCTIVITY (µmhos/cm)	41.0		29.3		31.4
APPARENT COLOR (cpu)	52		43		62
MAGNESIUM			0.92		
CALCIUM			2.8		
SODIUM			1.7		
POTASSIUM			0.28		
CHLORIDE	< 3		< 3		< 3
SULFATE	5		3		3
TN : TP	44		31		17
CALCITE SATURATION INDEX			3.4		

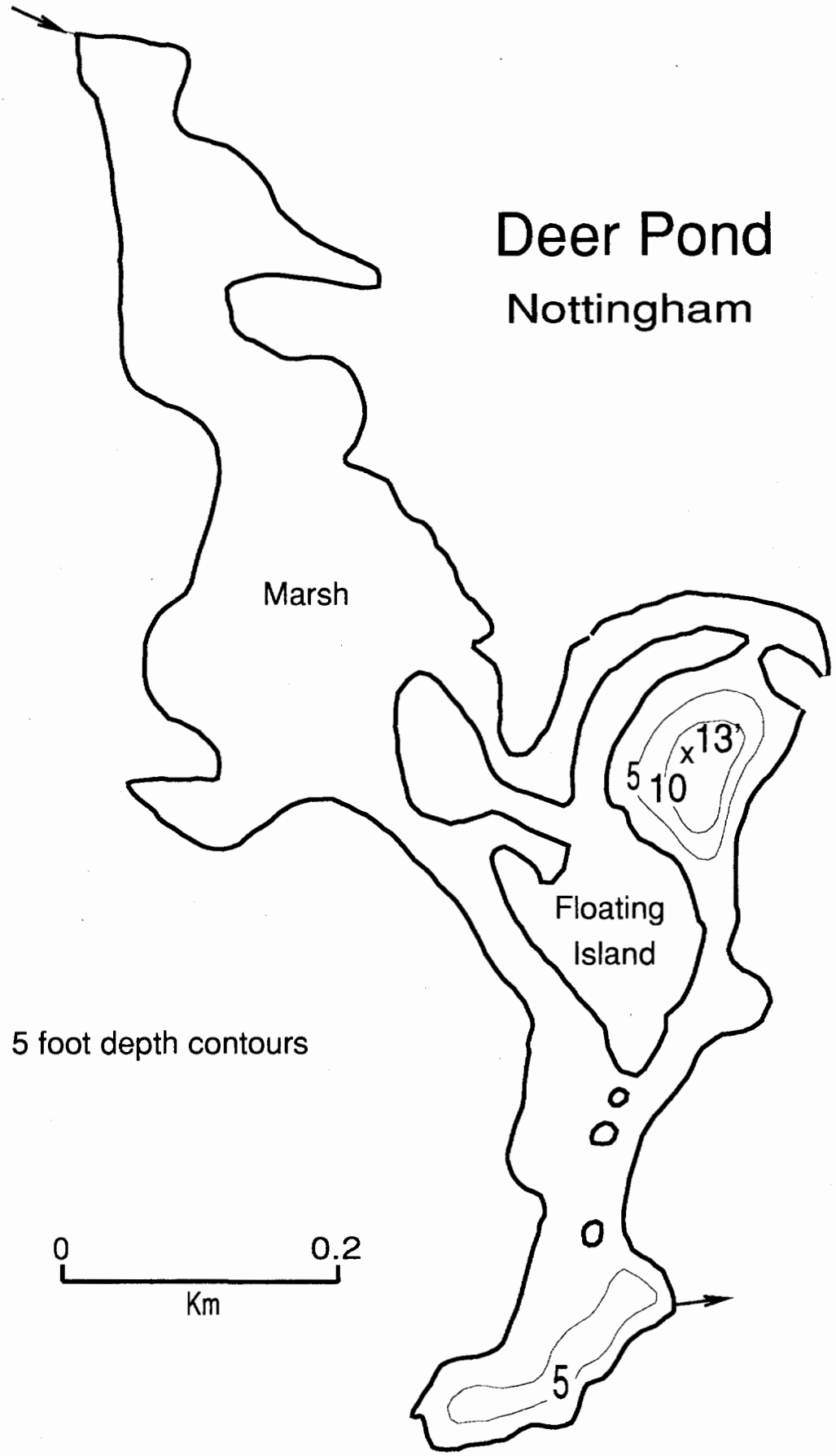
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1992

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	5	6	14	Eutro.

COMMENTS:

1. No public access; canoe access only over private land.
2. Only one cottage present with private access to the pond.
3. Water level was two feet below the high water mark during the summer survey.
4. Huge snapping turtle was observed.
5. Cryptomonas (50%) and tiny green flagellates (10%) were the dominant genera of wholewater phytoplankton.


Deer Pond
Nottingham
N
Marsh
5
10
x13'
Floating
Island
5 foot depth contours
0
0.2
Km
5

FIELD DATA SHEET

LAKE: DEER POND
DATE: 09/08/92

TOWN: NOTTINGHAM
WEATHER: OVERCAST, WARM

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	19.9	8.0	86 %
	0.5	19.9	8.0	86 %
	1.0	19.8	8.1	87 %
	1.5	19.0	5.8	62 %
	2.0	18.0	3.0	32 %
	2.5	17.5	0.8	8 %
	3.0	16.5	0.3	3 %
	3.5	15.0	0.4	4 %

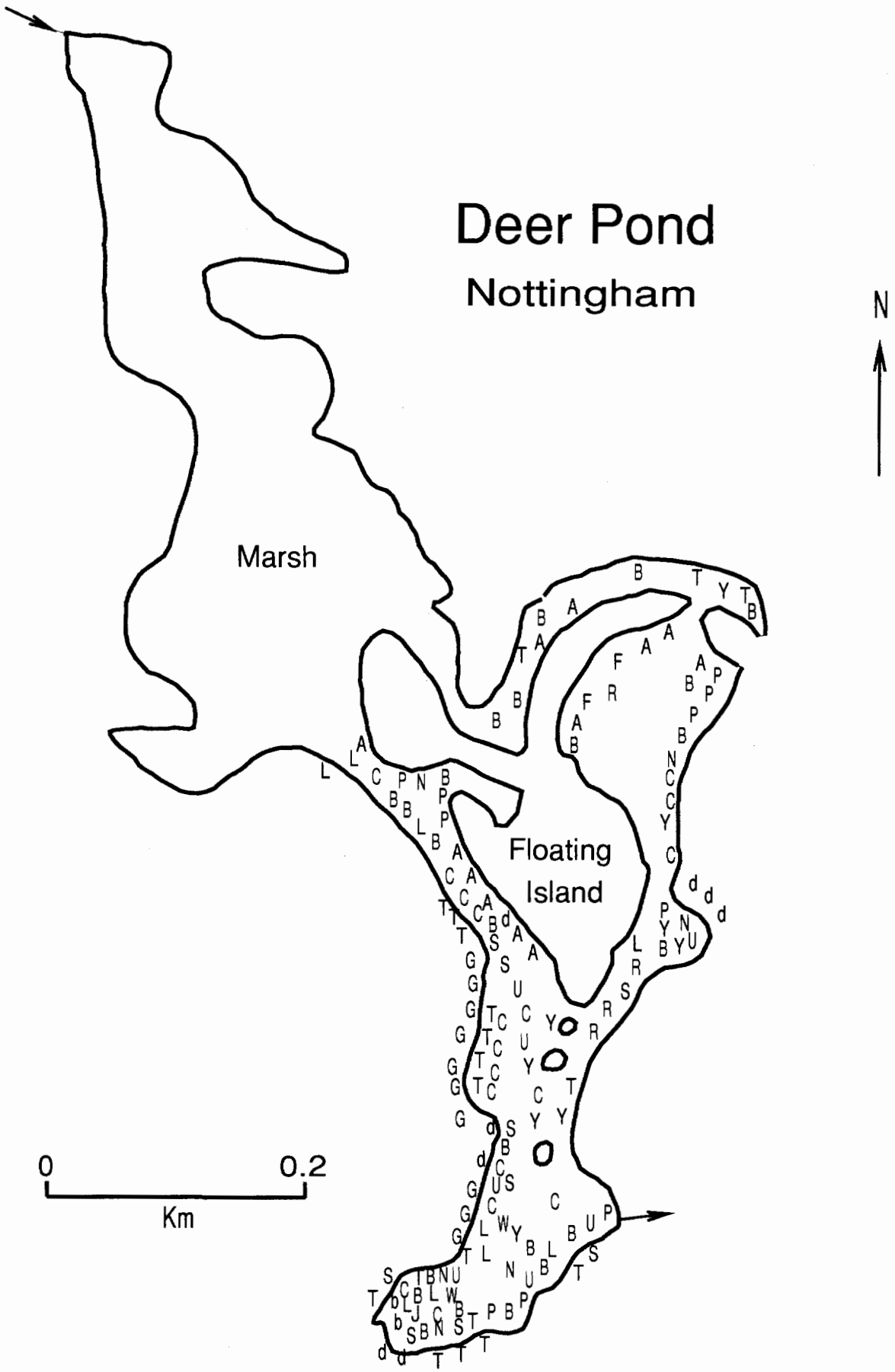
SECCHI DISK (m): 2.7

BOTTOM DEPTH (m): 4.0

TIME: 1315

COMMENTS:

*Dissolved oxygen values are in mg/L


Deer Pond
Nottingham
N
Marsh
Floating
Island
0
0.2
Km

AQUATIC PLANT SURVEY

LAKE: DEER POND TOWN: NOTTINGHAM DATE: 09/08/92

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
B	Brasenia schreberi	Water shield	Scattered
U	Utricularia	Bladderwort	Sparse
L	Lobelia dortmanna	Water lobelia	Scattered
Y	Nuphar	Yellow water lily	Scattered
T	Typha	Cattail	Common/Abun
S	Sparganium	Bur reed	Scattered
W	Potamogeton robbinsii	Robbins pondweed	Scattered
P	Pontederia cordata	Pickerelweed	Sparse
N	Nymphaea	White water lily	Scat/Common
d	Dulichium arundinaceum	Three-way sedge	Scat/Common
b	Scirpus	Bulrush	Sparse
J	Najas	Bushy pondweed	Abundant
C	Carex	Sedge	Abundant
A	Sagittaria	Arrowhead	Common/Abun
G	Gramineae	Grass family	Common
a	Peltandra virginica	Arrow arum	Scattered
F	Nymphoides cordatum	Floating heart	Sparse
R	Juncus	Rush	Scattered

OVERALL ABUNDANCE: Abundant

GENERAL OBSERVATIONS:

1. The entire northwestern half of the pond was a wetland.
2. There was very little open water; there were numerous floating islands of sundew, leatherleaf and Hypericum.
3. Clumps of blue-green algae were present along the western shoreline.
4. Najas covered much of the visible bottom.